

"FEE ADDRESS" INDICATION FORM

To: MAIL STOP: M Fee Correspondence
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Please recognize as the "Fee Address," under the provisions of 37 CFR 1.363, the following address:

COMPUTER PATENT ANNUITIES, INC.
225 Reinekers Lane
Suite 400
Alexandria, VA 22314

Payor Number: 000197

in the following listed application(s) or patent(s) for which the issue fee has been paid.

<u>Patent No.</u>	<u>Serial No.</u>	<u>Patent Date</u>	<u>US Filing Date</u>	<u>Confirmation No.</u>	<u>Attorney Docket No.</u>
7,301,276 B2	09/815,563	11/27/2007	03/23/2001	9704	SEL 248

Respectfully Submitted,



Mark J. Murphy
Registration No. 34,225
Date: January 9, 2008

COOK, ALEX, McFARRON,
MANZO, CUMMINGS & MEHLER, Ltd.
200 West Adams Street
Suite 2850
Chicago, Illinois 60606
(312) 236-8500

Customer No: 26568



US007301276B2

(12) **United States Patent**
Yamazaki et al.

(10) **Patent No.:** **US 7,301,276 B2**
(45) **Date of Patent:** **Nov. 27, 2007**

(54) **LIGHT EMITTING APPARATUS AND
METHOD OF MANUFACTURING THE SAME**

(75) Inventors: **Shunpei Yamazaki**, Tokyo (JP);
Takeshi Fukunaga, Kanagawa (JP)

(73) Assignee: **Semiconductor Energy Laboratory
Co., Ltd.** (JP)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

5,661,500 A *	8/1997	Shinoda et al.	313/485
5,923,962 A	7/1999	Ohtani et al.	438/150
5,932,327 A *	8/1999	Inoguchi et al.	257/102
5,962,970 A *	10/1999	Yokoi et al.	313/506
6,008,588 A *	12/1999	Fujii	313/498
6,037,712 A *	3/2000	Codama et al.	313/292
6,087,770 A *	7/2000	Kaneko et al.	313/310

(Continued)

(21) Appl. No.: **09/815,563**

(22) Filed: **Mar. 23, 2001**

(65) **Prior Publication Data**

US 2001/0024083 A1 Sep. 27, 2001

(30) **Foreign Application Priority Data**

Mar. 27, 2000 (JP) 2000-085866

(51) **Int. Cl.**
H01J 1/62 (2006.01)
H01J 63/04 (2006.01)

(52) **U.S. Cl.** 313/506; 313/505; 313/504;
313/498

(58) **Field of Classification Search** 313/483,
313/497, 498-506, 495, 496; 428/690;
257/10, 100, 91, 99, 98

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,137,481 A *	1/1979	Hilsum et al.	313/503
4,786,358 A	11/1988	Yamazaki et al.	156/643
5,163,220 A *	11/1992	Zeto et al.	29/846
5,227,252 A *	7/1993	Murayama et al.	428/690
5,399,936 A *	3/1995	Namiki et al.	313/504
5,400,047 A *	3/1995	Beesely	313/503
5,643,826 A	7/1997	Ohtani et al.	437/88
5,652,067 A *	7/1997	Ito et al.	313/502

FOREIGN PATENT DOCUMENTS

JP 7-130652 5/1995

OTHER PUBLICATIONS

Tsutsui, T. et al, "Electroluminescence in Organic Thin Films,"
Photochemical Processes in Organized Molecular Systems, pp.
437-450, 1991.

(Continued)

Primary Examiner—Joseph Williams

Assistant Examiner—Peter Macchiarolo

(74) *Attorney, Agent, or Firm*—Cook, Alex, McFarron,
Manzo, Cummings & Mehler, Ltd.

(57) **ABSTRACT**

A light emitting apparatus with high homogeneity in image quality is provided, which includes anodes 102 on an insulator 101, cathodes 107 orthogonal to the anodes 102, and EL layers 106 interposed between the anodes 102 and the cathodes 107, and auxiliary wirings 103 are electrically connected to the anodes 102. The auxiliary wirings 103 are made of a material lower in resistance than that of the anodes 102, thereby being capable of reducing the wiring resistance of the anodes 102.

21 Claims, 12 Drawing Sheets

